

a spiral inductor coupled between said inner conductor and a ground connection, said spiral inductor operating at a predefined RF impedance to propagate said signals along said inner conductor during normal operations and to dissipate electrical energy to said ground connection during a surge condition.

**2** **3.** (Amended) [The surge suppressor of claim 1, further comprising]

#### A surge suppressor comprising:

an inner conductor for conducting signals;

a spiral inductor coupled between said inner conductor and a ground plane.

connection, said spiral inductor operating at a predefined RF impedance to propagate said

signals along said inner conductor during normal operations and to dissipate electrical energy

to said ground connection during a surge condition; and

a surge blocking device coupled to said inner conductor and said spiral inductor for attenuating said electrical energy therethrough.

64. (Amended) [The surge suppressor of claim 1, further comprising]

#### A surge suppressor comprising:

an inner conductor for conducting signals;

a spiral inductor coupled between said inner conductor and a ground

connection, said spiral inductor operating at a predefined RF impedance to propagate said

signals along said inner conductor during normal operations and to dissipate electrical energy

to said ground connection during a surge condition; and

a surge blocking means coupled to said inner conductor and said spiral inductor for blocking said electrical energy therethrough.

5. (As Filed) The surge suppressor of claim 3 wherein said inner conductor and said surge blocking device are disposed within a cavity of a housing, said inner conductor and said cavity forming a coaxial line.

6. (As Filed) The surge suppressor of claim 3 wherein said surge blocking device comprises first and second plates and first and second transitions collectively forming a structure having a predefined impedance.

1           7. (As Filed) The surge suppressor of claim 3 wherein said surge blocking  
2 device is selected from a group consisting of a capacitor, parallel rods, coupling devices, and  
3 conductive plates.

1           7. (Amended) [The surge suppressor of claim 1 wherein]  
2           A surge suppressor comprising:  
3           an inner conductor for conducting signals; and  
4           a spiral inductor coupled between said inner conductor and a ground connection  
5           and operates at a predefined RF impedance to propagate said signals along said inner  
6           conductor during normal operation and to dissipate electrical energy to said ground connection  
7           during a surge condition, said spiral inductor [has] having a shape selected from a group  
8           consisting of archimedean, logarithmic, and hyperbolic.

1           9. (Allowed) A surge suppressor for discharging an electrical surge to  
2 ground comprising:  
3           a housing having a cavity, a surge port, and a protected port;  
4           an inner conductor disposed within said cavity of said housing for transmitting  
5 and receiving radio frequency signals;  
6           a spiral inductor disposed within said cavity of said housing, said spiral inductor  
7 having an inner spiral electrically coupled to said inner conductor and an outer spiral  
8 electrically coupled to said housing for discharging electrical energy to a ground connection;  
9 and  
10          a capacitive device disposed within said cavity of said housing and electrically  
11 coupled to said inner conductor and said spiral inductor for attenuating said electrical energy  
12 therethrough.

1           10. (Allowed) The surge suppressor of claim 9, further comprising an  
2 insulating member disposed within said cavity of said housing and coupled to said inner  
3 conductor for supporting said inner conductor in said cavity to electrically isolate said inner  
4 conductor from said housing.

1           11. (Allowed) The surge suppressor of claim 9 wherein said capacitive  
2 device comprises first and second plates and first and second transitions collectively forming a  
3 structure having a predefined impedance.

1           12. (Allowed) The surge suppressor of claim 9 wherein said inner  
2 conductor and said cavity forming a coaxial line.

1           13. (Canceled).

1           14. (Canceled).

1           15. (Canceled).

1           16. (Canceled).

1           17. (Allowed) A communications system comprising:  
2           communications equipment coupled to an antenna for receiving and  
3 transmitting signals via an inner conductor; and  
4           a surge suppressor for blocking excessive electrical energy developed at said  
5 antenna or on said inner conductor during a surge condition, the surge suppressor comprising:  
6           a spiral inductor coupled between said inner conductor and said ground  
7 connection, wherein said spiral inductor operates at a predefined RF impedance to propagate  
8 said signals along said inner conductor during normal operation and to dissipate said electrical  
9 energy to a ground connection during said surge condition.

1           18. (Allowed) The communications system of claim 17 wherein said surge  
2 suppressor further comprising a capacitive device coupled to said spiral inductor for  
3 attenuating said electrical energy.

1           19. (Allowed) The communications system of claim 17 wherein said surge  
2 suppressor further comprising a housing having a cavity configured to dispose said spiral  
3 inductor therein.

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